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EXAMINER

CREPEAU, JONATHAN

ART UNIT PAPER NUMBER

1746

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 20, 2004 has been entered.

This Office action addresses claims 1-8. Claims remain rejected under 35 USC 103 for substantially the reasons of record. Additionally, claim 7 is newly rejected under 35 USC §112. This action is non-final.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 7 recites "said extensible high polymer sheet," but parent claim 3 defines two such sheets. As such, it is believed that claim 7 should be amended to clarify which sheet(s) are being referenced.

Claim Rejections - 35 USC § 103

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-208708 in view of JP 2000-173564.

Regarding claims 1 and 3, JP 10-208708 is directed to a lithium battery comprising a cell structure group formed by folding an integral body of the unit cell (see Fig. 1). The unit cell comprises electrode material layers laminated through a separator (5) (see Fig. 1). The cell further comprises an electrolyte (see paragraph 17 of the machine translation). Regarding claims 2, 3, 4, and 5, the outer periphery of the cell structure is covered with an ion impermeable and extensible high polymer sheet (65) (see abstract; Figures 1 and 2). The high polymer sheet has a tensile elongation percentage of 500-1000%, which is anticipatory of the range recited in claims 2, 4, and 8. Regarding claims 6 and 7, the polymer may be polypropylene (see paragraph 17). Regarding claims 1 and 3, the battery comprises a battery container (foil 61), which is covered with a PET layer (62) on the outer surface thereof. Regarding the recitation in claims 1 and 3 that the electrolyte is poured in the battery container after the cell structure group is contained therein, this is a process limitation that does not further limit the structure of the claimed product. Accordingly, the limitation is given little patentable weight (MPEP §2113).

JP '708 does not expressly teach the battery container (61) is covered with an ion impermeable and extensible high polymer sheet having a tensile elongation percentage of 1% or more, as recited in claims 1 and 3.

JP 2000-173564 is directed to a thin battery bag body comprising an inner layer and an elastic thin film outer layer (see abstract; Figure 1). The outer layer may comprise the same

material as the inner layer, which includes fluorine-based elastomers such as PTFE and PVDF (see paragraph 16 of the machine translation).

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated by the disclosure of JP '564 to use a highly elastic thin film as the outer layer of the bag of JP '708. In the abstract, JP '564 teaches that "the outer rubber layer 6 is provided on the whole face of the surface of the bag body 1 so that the impact absorbing property can be drastically increased while holding the flexibility of the bag body 1." This disclosure would motivate the artisan to use the elastic rubber outer layer of JP '564 as the outer layer of JP '708. Although JP '564 does not appear to teach the exact tensile elongation value of the elastic outer layer, the artisan would be motivated to use a value within the range disclosed by JP '708 (i.e., 500-1000%) because the tensile elongation percentage is a measure of the elasticity of a material. Accordingly, the instantly claimed subject matter would be rendered obvious to the skilled artisan.

Response to Arguments

5. Applicant's arguments filed October 20, 2004 have been fully considered but they are not persuasive. Applicants state that the claims as presently drafted preclude an interpretation of the metal foil (61) of JP '708 as the battery "container." However, it is still not clear how the claim language precludes this interpretation. Furthermore, Applicant states that if the claim is interpreted this way, it is not seen how the reference reads on claim 2, which has two different

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high polymer sheets covering (i) a cell structure group and (ii) a battery container. It is acknowledged that JP '708 on its own does not anticipate the claims, but it is believed that JP '708 taken in combination with JP '564 (specifically, the use of the outer layer of JP '564 as the outer layer of JP '708) would render the claims obvious for the reasons set forth above. As such, the rejection over the JP references is maintained. Additionally, regarding the amendments to claims 6 and 7, the teachings at paragraph [0016] of JP '564 are also believed to render these claims obvious.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached at (571) 272-1414. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau
Primary Examiner
Art Unit 1746
February 22, 2005